



12B4-A LOW-MU TRIODE

9-PIN MINIATURE TYPE

*Intended for use in equipment having
series heater-string arrangement*

12B4-A

GENERAL DATA

Electrical:

Heater, for Unipotential Cathode:

Heater arrangement	Series	Parallel	
Voltage.	12.6	6.3	ac or dc volts
Current.	0.300	0.600	amp
Warm-up time (Average)	-	11	sec

For definition of heater warm-up time and method of determining it, see sheet HEATER WARM-UP TIME MEASUREMENT at front of this Section.

Direct Interelectrode Capacitances (Approx.):⁰

Grid to plate.	4.8	$\mu\mu\text{f}$
Grid to cathode and heater	5	$\mu\mu\text{f}$
Plate to cathode and heater.	1.5	$\mu\mu\text{f}$

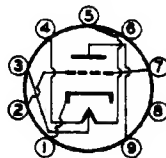
Characteristics, Class A₁ Amplifier:

Plate Voltage.	150	volts
Grid Voltage	-17.5	volts
Amplification Factor	6.5	
Plate Resistance (Approx.)	1030	ohms
Transconductance	6300	μmhos
Plate Current.	34	ma
Grid Voltage (Approx.) for plate current of 200 μamp	-32	volts
Plate Current for grid voltage of -23 volts	9.6	ma

Mechanical:

Mounting Position.	Any
Maximum Overall Length	2-5/8"
Maximum Seated Length.	2-3/8"
Length, Base Seat to Bulb Top (Excluding tip).	2" \pm 3/32"
Maximum Diameter	7/8"
Bulb	T-6-1/2
Base	Small-Button Noval 9-Pin (JETEC No. E9-1)
Basing Designation for BOTTOM VIEW	9AG

Pin 1 - Cathode
Pin 2 - Grid
Pin 3 - Heater
 Mid-Tap
Pin 4 - Heater
Pin 5 - Heater



Pin 6 - No Connection
Pin 7 - Grid
Pin 8 - No Connection
Pin 9 - Plate

⁰ With external shield JETEC No. 315 connected to cathode.

MAY 1, 1955

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TENTATIVE DATA

RADIO CORPORATION OF AMERICA, HARRISON, NEW JERSEY

12B4-A



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LOW-MU TRIODE

AMPLIFIER - Class A₁

Maximum Ratings, Design-Center Values:

PLATE VOLTAGE.	550	max.	volts
GRID VOLTAGE:			
Negative bias value.	50	max.	volts
PLATE DISSIPATION.	5.5	max.	watts
PEAK HEATER-CATHODE VOLTAGE:			
Heater negative with respect to cathode . .	200	max.	volts
Heater positive with respect to cathode . .	200 [▲]	max.	volts

Maximum Circuit Values:

Grid-Circuit Resistance:			
For fixed-bias operation	0.47	max.	megohm
For cathode-bias operation	2.2	max.	megohms

VERTICAL DEFLECTION AMPLIFIER

Maximum Ratings, Design-Center Values Except as Noted:

For operation in a 525-line, 30-frame system[□]

DC PLATE VOLTAGE	550	max.	volts
PEAK POSITIVE-PULSE PLATE VOLTAGE (Absolute maximum) [■]	1000 [■]	max.	volts
PEAK NEGATIVE-PULSE GRID VOLTAGE . . .	250	max.	volts
CATHODE CURRENT:			
Peak	105	max.	ma
Average	30	max.	ma
PLATE DISSIPATION.	5.5	max.	watts
PEAK HEATER-CATHODE VOLTAGE:			
Heater negative with respect to cathode . .	200	max.	volts
Heater negative with respect to cathode . .	200 [▲]	max.	volts

Maximum Circuit Values:

Grid-Circuit Resistance:			
For cathode-bias operation	2.2	max.	megohms

[▲] The dc component must not exceed 100 volts.

[□] As described in "Standards of Good Engineering Practice Concerning Television Broadcast Stations", Federal Communications Commission.

[■] This rating is applicable where the duration of the voltage pulse does not exceed 15 per cent of one vertical scanning cycle. In a 525-line, 30-frame system, 15 per cent of one vertical scanning cycle is 2.5 milliseconds.

[■] Under no circumstances should this absolute value be exceeded.

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